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IN THE

Supreme Court of the United States

October Term, 1998

KUMHO TIRE COMPANY, LTD., *ET AL.*,

Petitioners,

v.

PATRICK CARMICHAEL, *ET AL.*,

Respondents.

ON WRIT OF CERTIORARI TO THE
UNITED STATES COURT OF APPEALS FOR THE ELEVENTH CIRCUIT

BRIEF OF MARGARET A. BERGER, EDWARD J. IMWINKELRIED, AND STEPHEN A. SALTZBURG AS *AMICUS CURIAE* IN SUPPORT OF RESPONDENTS

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QUESTIONS PRESENTED

1. Where an expert testifies using the same level of intellectual rigor used generally in the expert's field of specialized knowledge, must the testimony be excluded under Fed. R. Evid. 702 without any determination of whether the testimony can assist the trier of fact, merely because the expert relies on specialized knowledge derived from experience which is not corroborated by "objective" tests?

2. Should federal trial judges be expected to devote scarce resources to motions in limine attacking expert testimony where the opponent of an expert's testimony, even after full discovery, has offered no record evidence in support of its criticisms?

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IDENTITY AND INTEREST OF *AMICI CURIAE*

Amici curiae are three law professors who specialize in the fi of evidence law and have devoted particular attention during the p two decades to the topic of expert testimony. Our qualifications briefly summarized in the Appendix to this brief.[1] We have interest in the outcome of the lawsuit at bar. However, we do hav strong interest in the proper understanding of the Federal Rules Evidence regulating the use of expert testimony in federal court, interest that we expressed well before this Court's grant of certior in this case.[2]

We regularly review lower federal court decisions applying th Court's decision in *Daubert v. Merrell Dow Pharmaceuticals, In* 509 U.S. 579 (1993), and participate in various evidence seminars a programs involving judges and attorneys at which the meaning a effect of *Daubert* are debated. In our view, reading *Daubert* in t manner suggested by the district court and petitioners: (1) would b inconsistent with the plain meaning of Rule 702 and the thrust Article VII of the Federal Rules of Evidence because it would depri the trier of fact of reliable and helpful opinions; and (2) wou squander judicial resources by leading district judges to ho extensive Rule 702 evidentiary hearings (so-called "*Daubert* hearings) whenever the opponent challenges the admissibility of th expert testimony.

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[1] All parties have granted blanket consent to the filing of *amicus* briefs in thi case. Counsel for a party did not author this brief in whole or in part. No person o entity, other than *amici curiae* and their counsel, made a monetary contribution t the preparation or submission of this brief.

[2] *E.g.*, Margaret A. Berger, *Evidentiary Framework*, in REFERENCE MANUA ON SCIENTIFIC EVIDENCE (Federal Judicial Center 1994); J. WEINSTEIN & M BERGER, WEINSTEIN'S FEDERAL EVIDENCE (2d ed. 1998); Margaret A. Berge *Procedural Paradigms for Applying the Daubert Test*, 78 MINN. L. REV. 134 (1994); P. GIANNELLI & E. IMWINKELRIED, SCIENTIFIC EVIDENCE (2d ed. 1993 & Supp. 1998); Edward J. Imwinkelried, *The Next Step After Daubert: Developing Similarly Epistemological Approach to Ensuring the Reliability of Nonscientifi Expert Testimony*, 15 CARDOZO L. REV. 2271 (1994); S. SALTZBURG, et al., FEDERA RULES OF EVIDENCE MANUAL: A COMPLETE GUIDE TO THE FEDERAL RULES O EVIDENCE (7th ed. 1998).

INTRODUCTION AND SUMMARY OF ARGUMENT

We believe that common sense and practical judgment should guide district courts in addressing the admissibility of various types of expert testimony, and in allocating resources to the decision of motions in limine concerning expert testimony.

I. As we explain in Part I, the Eleventh Circuit was correct in holding that the district court erred as a matter of law in relying solely on the four factors that *Daubert* suggested for evaluating the type of scientific evidence involved in that case, which concerned a field of classic Newtonian experimental science. Many fields of expert testimony at issue in federal court litigation simply lack the intellectual rigor of Newtonian experimental science: rather than using methods that enjoy a high level of objective verifiability, they depend on a more subjective application of the expert's practical experience to the particular facts of a case. The efforts of petitioners and their *amici* to turn *Daubert* into an evidentiary Procrustean bed — one that would endanger a vast array of expert testimony that has been accepted in federal courts for decades — should be rejected.

We are in no way criticizing the *Daubert* test; indeed, all of us have voiced appreciation of *Daubert* in our writings and speeches. We urge, however, that *Daubert* be confined to its appropriate sphere. There do exist questions — such as the general capability of a substance to cause particular health effects, the critical issue in both *Daubert* and *General Electric Co. v. Joiner*, 118 S. Ct. 512 (1997) — that are answerable only through inferences "derived by the scientific method," 509 U.S. at 590, as that method is described in *Daubert*. But *Daubert* should not be extended to require the exclusion of all opinions drawing on any aspect of scientific or technical knowledge that in some measure involves the use of subjective judgment based on an expert's experience. Such an expansion of *Daubert* would be inconsistent with Rule 702's explicit acknowledgment of "experience" as a basis for expertise, would contradict this Court's previous interpretations of Article VII of the Federal Rules of Evidence, and would be inconsistent with the basic common law heritage of Anglo-American evidence law.

Nor is petitioners' expansive reading of *Daubert* grounded in reality. In our everyday lives, we often obtain assistance from persons

who, because of their past experience, have specialized knowledge and are able to reach reliable conclusions based on that experience. When such a person appears in court as an expert, the pertinent question should be whether, in light of such past experience, his or her opinions can assist the trier of fact — not whether they have been validated by the factors set forth in *Daubert* bearing on the validity of an application of the scientific method. As *Daubert* emphasized, the inquiry under Rule 702 must be flexible. No bright-line test is feasible, because the circumstances under which an expert's opinion can be deemed reliable depend on the specific field of expertise in question, and on the particular issue in dispute.

Viewed at a sufficient level of generality, *Daubert* does suggest an approach for assessing the admissibility of all expert testimony under Rule 702. Chief Judge Posner has formulated the following test: a federal court should make an assessment of the epistemology of the particular field involved, to determine whether the expert is exercising *the same level of intellectual rigor* that generally characterizes that expert's field of expertise. *See, e.g., Rosen v. Ciba-Ceigy Corp.*, 78 F.3d 316, 318-19 (7th Cir.) (Posner, C.J.), *cert. denied*, 117 S. Ct. 73 (1996); *Braun v. Lorillard Inc.*, 84 F.3d 230, 234 (7th Cir.) (Posner, C.J.), *cert. denied*, 117 S. Ct. 480 (1996). "At that level of generality, the *Daubert* framework is appropriate for all kinds of expert testimony," although, of course, "the measure of intellectual rigor will vary by the field of expertise and the way of demonstrating expertise will also vary." *Tyus v. Urban Search Mgmt.*, 102 F.3d 256, 263 (7th Cir. 1996), *cert. denied*, 117 S. Ct. 2409 (1997). We agree with this test, as does the Solicitor General. *See* Brief for the United States as *Amicus Curiae* Supporting Petitioners at 19-20 & n.6 (citing *Tyus* and Imwinkelried, *The Next Step*, *supra* note 2).

II. As we explain in Part II, we urge this Court to clarify, for the benefit of both litigants and district judges, the procedures that are appropriate for the resolution of challenges to the admissibility of expert testimony. Rather than having trial judges operate under the view that such challenges should be resolved through lengthy "*Daubert* hearings," which sometimes amount essentially to mini-trials, such challenges should ordinarily be decided on the papers, through consideration of carefully targeted motions in limine.

Under the new discovery rules, proponents of expert testimony must disclose all the bases for their experts' testimony through Fed.

R. Civ. P. 26(a)(2)(B) expert witness reports, and through depositions, which are now available as of right under Fed. R. Civ. P. 26(b)(4). Armed with this information, opponents of expert testimony should be expected to file motions in limine that focus specifically on the record evidence demonstrating a particular deficiency in the foundation for the expert testimony. Once the proponent is given a fair opportunity to respond to criticisms, the district court is then required under Fed. R. Evid. 104(a) to resolve any factual disputes that appear on the record and to render a ruling. However, the district court need not hold a live hearing. Live hearings in which testimony is taken should be the exception, reserved for particularly complicated cases, rather than the rule.

ARGUMENT

I. PETITIONERS' VIEW OF RULE 702 UNREASONABLY DENIGRATES EXPERT TESTIMONY BASED ON SPECIALIZED KNOWLEDGE THAT IS DERIVED FROM EXPERIENCE

In support of the district court's decision below, petitioners and their *amici* urge that the four specific factors for assessing the reliability of scientific evidence set out in *Daubert* should be viewed as presumptively ruling out expert testimony of a scientific or technical nature that relies not on objective tests, but on the expert's exercise of subjective judgment, using his or her past experience in the field. According to petitioners, other things being equal, if the technique used in a given field "is subjective in nature," it "should be regarded as less reliable than a technique capable of being tested." Pet. Br. 40. The same follows from the fact that the "error rate" of an expert relying on specialized knowledge derived from experience will be, by definition, unknown. Pet. Br. 42. Applying these principles, petitioners complain that "Carlson's method cannot be tested but instead is almost wholly subjective," Pet. Br. 41, authorizing exclusion of the testimony on that basis. Pet. Br. 49-50. Several of petitioners' *amici* make similar arguments favoring the presumptive exclusion of expert testimony based on specialized knowledge derived from experience. One *amicus* brief asserts, for example, that only when the principles underlying a subjective discipline are

"undisputed" should "impressionistic or anecdotal testimony" from a witness relying on experience be readily allowed: "If a scientific claim is genuinely in dispute, however, a trial court should insist on scientifically validated empirical data," and a "rigorous application of the scientific method." Brief for John Allen, et al., at 2 & n.23.[3]

This approach should be rejected for four reasons. First, it conflicts with both the text and legislative history of the Federal Rules of Evidence, which do not even faintly suggest a bias against expert testimony based on specialized knowledge that is derived from experience. Second, it is contrary to the fundamental underpinnings of Anglo-American evidence law. Third, it does not provide a practical means of carrying out the policy of Article VII to eliminate barriers to the ability of the judicial system to draw on helpful expertise existing outside the courtroom. Fourth and finally, adopting petitioners' approach would call into question the admissibility of a wide range of useful expert testimony that has been routinely admitted in federal court for decades, both before and after the enactment of the Rules in 1975.

A. Petitioners' Approach Conflicts With the Text and Legislative History of the Federal Rules of Evidence, Which Suggest No Bias Against Expert Testimony Based on Specialized Knowledge Derived From Experience

Nothing in the language or legislative history of the Federal Rules of Evidence justifies any presumption against admitting expert testimony from fields which depend heavily on an expert's

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[3] *See also* Brief of Rubber Manufacturers Ass'n at 5 (arguing that Carlson "went no further than looking at failed tires and guessing at the cause of failure."); *id.* at 13 (arguing that "Carlson based his opinion in this case solely on his claimed past experience analyzing tire failures," in what amounted to an "experience without principles" approach); *id.* at 27 (arguing that Carlson's testimony "cannot be reliable because he relied on nothing but his look and guess approach"); Brief of the American Tort Reform Association, et al., at 16 (arguing that Carlson's opinion lacked "a supporting scientific principle" and "was little more than his own purely subjective belief."); Brief for the American Automobile Manufacturers Ass'n, et al., at 23 (arguing that Carlson's testimony amounted to "an uncorroborated mass of deductions by one individual using subjective reasoning," to "attempt[] to identify a probable cause of what happened long ago."); *id.* at 23 (warning against "[a]n over-generous approach to so-called 'experience' experts").

experience and his or her subjective judgment based on that experience. Indeed, the text and legislative history of the Rules affirmatively support the admission of such evidence.

This Court has consistently interpreted the Federal Rules of Evidence like other statutory provisions, in accord with their plain language. *E.g.*, *Daubert*, 509 U.S. at 587; *Beech Aircraft Corp. v. Rainey*, 488 U.S. 153, 163 (1988). Obviously, the plain language of the Rules authorizes expert witnesses to testify based on their own personal experience, not only based on abstract scientific or other principles of knowledge. Rule 602 permits testimony where "the witness has personal knowledge of the matter," and permits the witness "to prove personal knowledge" by "the witness' own testimony." Rule 702 provides that, in the alternative, an expert may be qualified "by knowledge, skill, *experience*, training, *or* education," and that, if qualified on any of these grounds, the expert "may testify *thereto*," if it "will assist the trier of fact" (emphasis added).

Although "[i]t would be extraordinary to require legislative history to *confirm* the plain meaning of" a Federal Rule of Evidence, *Bourjaily v. United States*, 483 U.S. 171, 178 (1987), the relevant legislative history strongly cuts against petitioners' approach. Consistent with the "liberal thrust of the Federal Rules," the expert testimony provisions of Rules 702 through 705 follow a "general approach of relaxing the traditional barriers to 'opinion' testimony." *Rainey*, 488 U.S. at 169; *see also Daubert*, 509 U.S. at 588-59.[4] The Advisory Committee's Notes to all four rules emphasize this

[4] These changes were hardly accidental. "Wigmore, McCormick, and other eminent commentators had complained for decades about common-law restrictions on opinion evidence that deprived triers of fact of valuable information needed for sounder adjudications." Margaret A. Berger, *United States v. Scop: The Common Law Approach to an Expert's Opinion About a Witness's Credibility Still Does Not Work*, 55 BROOKLYN L. REV. 559, 559 (1989). Thus, "the rules reflect an enlightened, academic view of opinion testimony that dates back some fifty years." Hon. George C. Pratt, *A Judicial Perspective on Opinion Evidence Under the Federal Rules*, 39 WASH. & LEE L. REV. 313, 314 & n.5 (1982) (citing authorities). The statutory scheme "rel[ies] heavily on the adversary system," and trusts the ability of counsel to present such testimony and of juries to evaluate it. *Id.* at 313; *see also Daubert*, 509 U.S. at 589, 595-96. The goal "[t]hat evidence scholars had long been seeking had now come to pass." Hon. Jack B. Weinstein, *Improving Expert Testimony*, 20 U. RICH. L. REV. 473, 477 (1986).

approach.[5] Petitioners' suggestion that witnesses testifying primarily based on their experience should be treated as second-class experts cannot be squared with these provisions. Neither Rule 702 nor any other rule authorizes such discrimination.

Further, Rule 402 states that "[a]ll relevant evidence is admissible, except as otherwise provided" by a positive legal enactment, thus barring the creation of any common law rule to make admission of experience-based testimony more difficult.[6]

Even more specifically, the illustrations of expert testimony set forth in the Advisory Committee's Notes make clear that the drafters contemplated that under Article VII of the Rules, experience-based expert testimony would continue to be received in federal court. For example, the Advisory Committee's Note to Rule 703 discusses the proper bases for the testimony of two types of experts who rely

[5] See Advisory Committee's Notes to Rule 702 (observing that rule is "broadly phrased" to expand the admissibility of expert testimony); Rule 703 (noting need to overturn the common law hearsay obstacle to admissibility of expert opinion to "broaden the basis for expert opinions"); Rule 704 (noting value of eliminating the objection to admissibility of expert opinion on the "ultimate issue" in a case, thereby facilitating the "basic approach" of the rules to admit expert testimony whenever "helpful to the trier of fact"); Rule 705 (marking the demise of the "complex and time consuming" hypothetical question rule).

[6] Rule 402 provided the baseline for the only actual holding announced by this Court in *Daubert*, that continued use of the common law *Frye* rule was barred under Rule 402 given that it had not been codified in Rule 702. *See* 509 U.S. at 587-88. In enacting the Federal Rules of Evidence, Congress aimed to solve "the lack of uniformity and clarity in the present law of evidence on the Federal level." S. Rep. No. 93-1277, 93rd Cong., 2d Sess. (1974), at [1974] U.S. CODE CONG. & AD. NEWS 7054. Rule 402 was "'the keystone to the whole scheme," designed "to sweep away all pre-existing rules of exclusion," to "mak[e] clear that the rest of the Evidence Rules are exceptions to the basic rule of relevance," and "to foreclose courts from changing rules of evidence by decision." 22 C. WRIGHT & K. GRAHAM, FEDERAL PRACTICE AND PROCEDURE: EVIDENCE § 5192, at 177, § 5199, at 222 & n.17 (1978) (citations omitted). Since 1975, using the procedures authorized by Rule 402 for the creation of new exclusionary rules, Congress has by statute amended the Rules to exclude one narrow category of expert testimony (through current Rule 704(b)), and two proposals for the amendment of Rule 702 have been made through the Advisory Committee rulemaking process (with one proposal currently pending). Those developments further illustrate the inappropriateness of petitioners' effort to secure a de facto amendment of Rule 702 through the mechanism of common law adjudication.

heavily on experience: a physician forming a diagnosis, and "an 'accidentologist'" opining about "the point of impact in an automobile collision." Similarly, the Advisory Committee's Note to Rule 704, abolishing the "ultimate issue" rule, favorably cites four "modern decisions illustrat[ing] the trend to abandon the rule completely." Each decision permitted the admission of an opinion on an ultimate issue but, more importantly for our purposes, each decision involved heavily experienced-based expert testimony.[7]

B. Petitioners' Approach is Contrary to Fundamental Principles of Anglo-American Evidence Law

Petitioners' war on experience-based expert testimony is fundamentally incompatible with the common law underpinnings of the Federal Rules of Evidence, which this Court has recognized offer

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[7] *See Clifford-Jacobs Forging Co. v. The Industrial Comm'n*, 166 N.E.2d 582, 585 (Ill. 1960) (permitting medical doctor to opine as to possible cause of fatal heart attack suffered by worker who was treated by no physician and on whom no autopsy was performed); *Schweiger v. Solbeck*, 230 P.2d 195, 203 (Ore. 1951) (qualifying testimony of civil engineer on the cause of a local landslide, given that he "was familiar with soil and land conditions" in the locality and given that an expert may qualify "not only by study but by personal experience and observation"); *People v. Wilson*, 153 P.2d 720, 724 (Cal. 1944) (permitting medical doctor to testify about whether abortion was medical necessity, combining the patient's past statements "with his own observations to form an opinion as to the patient's past or present physical or mental condition"); *Dowling v. L.H. Shattuck, Inc.*, 17 A.2d 529, 532 (N.H. 1941) (stating that an expert may testify based on "either study or experience," and holding that an illiterate laborer was amply qualified to testify to whether a ditch had been negligently shored up, as "he had had five years experience in working upon shoring in various places, sometimes under conditions substantially similar" to those involved in the case).

This Court has articulated as a key canon for interpreting the Federal Rules of Evidence that where, as here, "Congress did not amend the Advisory Committee's draft in any way that touches on the question before us, the Committee's commentary is particularly relevant in determining the meaning of the document Congress enacted." *Rainey*, *supra*, 488 U.S. at 165 n.9. Where there is any ambiguity as to "[w]hat was on the Committee's mind," the Court has closely examined the sources cited by the Committee. *Id.* at 166.

valuable insights into the proper interpretation of the Rules.[8] Under the common law, the fact that a witness had personal knowledge of a given matter cut in favor of — not against — admissibility of the testimony. The common law courts embraced the premise of John Locke, commonly regarded as the father of modern epistemology, that "all the materials of Reason and Knowledge" derive "From *Experience*: In that, all our Knowledge is founded."[9] In his ESSAY CONCERNING HUMAN UNDERSTANDING, Locke rejected the traditional view that certain ideas are innate to the human mind,[10] and contended instead that experience alone provides the two "Fountains of Knowledge, from whence all the *Ideas* we have, or can naturally have, do spring."[11] Locke posited that the two sources of knowledge are sensation and reflection. Sensation provides us with raw data, "distinct *Perceptions* of things," the "great Source, of most of the *Ideas* we have."[12] By contrast, reflection is the means "from which Experience furnisheth the Understanding with *Ideas*," which derive from the mind "reflecting on its own Operations within it self."[13]

Reasoning from that premise, the common law courts were understandably receptive to testimony reciting primary sense impressions. When a witness truthfully recites such impressions, the principal possible source of error will be some mistake in the original

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[8] *Daubert*, 509 U.S. at 587-88 (citing *United States v. Abel*, 469 U.S. 45, 51-52 (1984)). *See also Norfolk Redevelopment & Housing Auth. v. Chesapeake & Potomac Tel. Co.*, 464 U.S. 30, 35-36 (1983); *Moragne v. States Marine Lines, Inc.*, 398 U.S. 375, 392 (1970).

[9] J. LOCKE, AN ESSAY CONCERNING HUMAN UNDERSTANDING 104 (Peter H. Nidditch ed., Clarendon Press 1975) (1689).

[10] *See id.* at 43-103.

[11] *Id.* at 104. *See generally* Roger Woolhouse, *Locke's Theory of Knowledge*, in THE CAMBRIDGE COMPANION TO LOCKE 146-71 (V. Chappell ed., 1994); 5 F. COPLESTON, A HISTORY OF PHILOSOPHY 69, 76-78 (1959).

[12] *Id.* at 105.

[13] *Id.*

perception. Like Locke,[14] the common law courts appreciated that each inferential step away from the underlying raw data introduces a further potential for error. That appreciation accounted for their skepticism about opinions such as scientific and other opinion testimony, which led to the imposition of a number of restrictions on such testimony at common law. *See, e.g.*, JOHN WILLIAM STRONG, et al., MCCORMICK ON EVIDENCE §§ 10-12 (4th ed. 1992); *see also* p. 6, note 4, *supra*. In short, the common law restrictions on opinion testimony are traceable to Lockean epistemology and its bias *in favor of* knowledge based on direct experience.

Indeed, the basic philosophy of Anglo-American evidence law in general, which one leading contemporary scholar has termed "optimistic rationalism,"[15] is traceable directly to Locke. The first modern evidence treatise, published in 1754 by a disciple of Locke (Lord Chief Baron Gilbert), sought to articulate a coherent theory of evidence based on Locke's philosophy.[16] Its central premise rested on an experienced-based theory of knowledge, holding that "there can be no Demonstration of a Fact without the best Evidence that the Nature of the Thing is capable of."[17] The dominance of British empiricism can be found in the leading treatises, marking the rationalist tradition in evidence scholarship, to the present day.[18]

The thrust of the rationalist tradition of evidence law, then, is that courts should and do take an essentially empirical approach to

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[14] *See* J. LOCKE, *supra* note 9, at 663-64 (noting that with "any Testimony, the farther off it is from the original Truth, the less force and proof it has. . . . So that *in traditional Truths, each remove weakens the force of the proof*").

[15] W. TWINING, THEORIES OF EVIDENCE: BENTHAM AND WIGMORE viii, 12-16, 177 (1985).

[16] *Id.* at 1.

[17] *Id.* at 1-2 (quoting SIR JEFFREY GILBERT, THE LAW OF EVIDENCE 1 (3d ed. 1769)).

[18] *Id.* at 13-14, 16, 18. *See also* 1A J. WIGMORE, EVIDENCE IN TRIALS AT COMMON LAW §§ 37.1-37.5 (P. Tillers rev. ed. 1983); William Twining, *The Rationalist Tradition in Evidence Scholarship*, in RETHINKING EVIDENCE: EXPLANATORY ESSAYS 32-91 (1990).

epistemology, positing that ultimately all knowledge is based on experience, and expressing a strong preference for raw data as opposed to knowledge based on reflection and inference.

That common law tradition continues under the Federal Rules of Evidence with respect to expert testimony. In some cases, the expert witness has personal experience, meeting the ordinary standard for reliability of witness testimony under Rules 602 and 701. Indeed, petitioners and their *amici* concede, through their analysis of the beekeeper hypothetical, that expert testimony is readily admissible if it involves a generalization about raw data that is based directly on personal knowledge.[19]

In other cases, the expert witness will rely at least in part on vicarious experience, having gained experience in a given field not just through personal observation, but by absorbing information acquired by third persons — either through direct interactions with them or by reviewing relevant literature. Publication is an important component of the scientific method precisely because it enables scientists to share, and build on, each other's research experience. As Chief Judge Posner has observed, given that "[a]ll perception is inferential, and most knowledge social . . . [k]nowledge acquired through others may still be personal knowledge within the meaning of Fed. R. Evid. 602, rather than hearsay," and "[t]he same principles apply to the acquisition of knowledge by expert witnesses." *Agfa-Gevaert, A.G. v. A.B. Dick Co.*, 879 F.2d 1518, 1523 (7th Cir. 1989).

Given the tradition under Anglo-American evidence law, which continues under the Federal Rules of Evidence, favoring witnesses who have personal knowledge of the subject matter of their testimony, the argument of petitioners and their *amici* is indeed odd. Adopting the idea that "subjective" expert testimony based on specialized knowledge derived from experience, such as Dennis Carlson's, should be distrusted and targeted for exclusion *precisely because* it is based largely on personal knowledge, see p. 4-5 & note 3, *supra*, would turn evidence law on its head. Under petitioners' theory, the more personal knowledge that an expert witness possesses, the less likely

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[19] *See* Pet. Br. at 27-28; Brief of the American Tort Reform Ass'n at 19; Brief of Rubber Manufacturers Ass'n at 12 n.10; Brief for the American Automobile Manufacturers Ass'n at 22-23.

that his or her testimony will be admitted.[20]

C. The Policy of Article VII is to Eliminate Barriers That Prevent the Judicial System From Having the Benefit of Helpful Expertise That Exists Outside the Courtroom

The Advisory Committee's Note to Rule 703 reflects an important policy judgment that points to a practical construction of Rule 702 which is faithful to the language of the Rules, their legislative history, and their common law background. In the Note, the Advisory Committee stated that by securing for experts the right to rely in their testimony on hearsay sources "of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject," Rule 703 "is designed to broaden the basis for expert opinions beyond that current in many jurisdictions and to bring the judicial practice into line with *the practice of experts themselves when not in court*" (emphasis added).

That fundamental policy judgment should inform the interpretation of Rule 702 as well as that of Rule 703. Rule 702 should be read in harmony with Rule 703, so that the judicial system will not be deprived of helpful expert testimony that is based on specialized knowledge derived from experience, as long as the expert is employing *the same level of intellectual rigor* that characterizes the practice of the expert when not in court. As stated at the outset of this brief, we agree with the Seventh Circuit that defined at *that* level of generality, this Court's *Daubert* framework is appropriate for all types of expert testimony, ensuring that the level of intellectual rigor required of a given expert will vary field by field, and issue by issue, so that experts will not be placed in an evidentiary straightjacket that may deprive the trier of fact of helpful, often necessary information. See p. 3, *supra*.

Under this view of Rule 702, the task of the trial judge is to exercise his or her discretion, in the particular case, using a pragmatic test focusing on helpfulness to the trier of fact. On the one hand,

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[20] *Compare* WILLIAM JAMES, THE MEANING OF TRUTH 269-70 (1911) ("Already have men grown unanimous in the opinion that . . . in the long run it is useless to resist experience's pressure; that the more of it a man has, the better position he stands in, in respect of truth; [and] that some men, having had more experience, are therefore better authorities than others").

purportedly expert testimony should not be ruled inadmissible solely because it entails a significant element of subjective analysis based on specialized knowledge derived from experience. Experience, as well as the scientific method, can enable a person to test hypotheses and refine them in light of the data that emerge, through a process that involves a significant element of subjective analysis. On the other hand, subjective analysis by self-proclaimed "experts" should not be treated as automatically admissible. *Daubert* insisted that the proponent must establish that the expert's testimony rests on more than the witness's "subjective belief." 509 U.S. at 590. The district court may need to determine whether the expert's opinion rests on unverifiable hypotheses,[21] or instead rests on a chain of inferences that jurors can understand and evaluate.

When jurors on the basis of their experience can be helped by specialized knowledge that educates them about relevant factors to consider in determining an issue, the threshold for admissibility need not be as high as when a sophisticated scientific question beyond the jury's everyday world experience and ordinary mode of reasoning is at issue. For example, given the consensus on the reliability of conventional photography, and the typical juror's experience with comparing features in a photograph to the reality which a photograph depicts, the courts should accept a less rigorous foundation for an

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[21] Consider, for example, "clinical ecologists," who claim to be able to diagnose, based on an entirely subjective analysis of various test results, the disease of "multiple chemical sensitivity" (MCS), which assertedly can be triggered by brief exposures to certain chemicals that depress a person's immune system and create long-term hypersensitivity. *See, e.g., Summers v. Missouri Pac. R.R. Sys.*, 132 F.3d 599, 603-04 (10th Cir. 1997) (affirming exclusion of MCS testimony); *Coffin v. Orkin Exterminating Co.*, 1998 U.S. Dist. LEXIS 11411, at *8-*11 (D. Me. July 21, 1998) (excluding MCS testimony and summarizing uniform line of federal court precedent excluding it). *See also* K. FOSTER & P. HUBER, JUDGING SCIENCE: SCIENTIFIC KNOWLEDGE AND THE FEDERAL COURTS 59 (1997); Margaret A. Berger, *Evidentiary Framework*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 73-75 (Federal Judicial Center 1994); Michael I. Luster, et al., *Chemical Pollutants and "Multiple Chemical Sensitivities,"* in PHANTOM RISK: SCIENTIFIC INFERENCE AND THE LAW 379-99 (K. Foster, et al., eds., 1993).

identification expert's evaluation of a surveillance photograph[22] than when the proponent offers testimony based on space age digital techniques for enhancing photographs of latent fingerprints. *E.g.*, *State v. Hayden*, 950 P.2d 1024 (Wash. App. 1998).

Much as we might profit on the lecture circuit by helping "construct a complex 'Daubertology' discipline in which fine distinctions are drawn among types of expert testimony," we agree that the standards for admitting testimony from a given field "should be evaluated by reference to the 'knowledge and experience' of that particular field." American College of Trial Lawyers, *Standards and Procedures for Determining the Admissibility of Expert Evidence After Daubert*, 157 F.R.D. 571, 577, 579 (1994).[23] It is infeasible for the Court to announce a more specific test. The basic thrust of *Daubert* and *Joiner* is right, and should be extended. As *Daubert* stated, the inquiry must be flexible, and as *Joiner* added, the appellate courts must accord the trial judge a substantial measure of discretion in conducting the inquiry.

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[22] For example, expert testimony is routinely allowed in bank robbery cases to aid the jury in deciding whether photographic evidence identifies the defendant as the perpetrator. *See, e.g.*, *United States v. Alexander*, 816 F.2d 164, 167-68 (5th Cir. 1987) (reversing district court's refusal to permit defendant to call expert in celphalometrics, that is, the measurement of dimensions of the head, to testify that defendant could not be the bank robber depicted in photographs); *United States v. Everett*, 825 F.2d 658, 662 (2d Cir. 1987) (FBI expert on photogrammetry allowed to testify to help jury calculate height of bank robber in photographs), *cert. denied*, 484 U.S. 1069 (1988); *United States v. Barrett*, 703 F.2d 1076, 1084 n.14 (9th Cir. 1983) (government photographic expert allowed to testify about similarities "between the tonal condition, style and placement of buttons, stripes, and stains" on the clothing seized from defendant and the clothing depicted in photographs of bank robber); *United States v. Sellers*, 566 F.2d 884, 885-86 (4th Cir. 1977) (photographic experts on both sides allowed to testify on whether disguised bank robber in photograph resembled defendant).

[23] *See also* 7 J. WIGMORE, EVIDENCE IN TRIALS AT COMMON LAW 1923 (James H. Chadbourn rev., 1978) (proper test for admitting expert testimony is: "On this subject can a jury receive from this person appreciable help? In other words, the test is a relative one, depending on the particular subject and the particular witness with reference to that subject."); Learned Hand, *Historical and Practical Considerations Regarding Expert Testimony*, 15 HARV. L. REV. 40, 40 (1901) ("No one will deny that the law should in some way effectively use expert knowledge whenever it will aid in settling disputes.").

D. Petitioners' Approach Would Endanger a Wide Variety of Routinely Admitted Expert Testimony That is Based on Practical Experience

If adopted, the impact of petitioners' approach for expert testimony in federal court would be staggering. Tire failure analysts are hardly alone in relying on specialized knowledge derived from experience, combined with their scrutiny of the facts of the particular case, to arrive at an unavoidably subjective analysis of an issue in dispute. Petitioners' approach would call into question the admissibility of expert testimony from a wide variety of fields such as the forensic sciences, even though such testimony has been routinely accepted in federal and state courts.[24] For example:

Ballistics. In 1923, on the same day that it announced what eventually became known as the "*Frye* test" requiring "general acceptance" of expert testimony based on novel scientific principles, *see Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), the D.C. Circuit affirmed the admission into evidence in a murder trial of testimony from a firearms identification expert (commonly referred to as "ballistics" testimony) linking the fatal bullet to the defendant's

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[24] "Forensic science is the application of the natural sciences to matters of law and it includes a variety of different activities and specialities." Henry C. Lee, *Forensic Science and the Law*, 25 CT. L. REV. 1117, 1117-18 (1993) (listing major speciality areas). "Forensic science comes to the public's attention most often as a result of its use in major criminal cases," but "[f]rom a scientific point of view, the distinction between civil and criminal litigation is artificial." *Id.* at 1123. The tire failure analysis at this issue fits within the ambit of forensic engineering, which "involves the determination and reconstruction of material failures in relation to accidents, disasters and fires." *Id.* at 1118.

"Many of the examinations conducted in a forensic science laboratory are rather subjective," in that they "call[] upon the experience of the examiner for the proper interpretation of the test results." John I. Thornton, *The General Assumptions and Rationale of Forensic Identification*, in 2 MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY 21-22 (David L. Faigman, et al., eds., 1997) (hereinafter "MODERN SCIENTIFIC EVIDENCE"). *See also* Andre A. Moenssens, *Handwriting Identification Evidence in the Post-Daubert World*, 66 UMKC L. REV. 251, 277 (1997) (if *Daubert* means "that all expert opinion evidence must be . . . found failing if its conclusions cannot be quantified or statistical error rates demonstrated, many of the forensic sciences that courts have long acknowledged as more or less reliable sources of opinion testimony helpful to the fact finder will no longer produce admissible opinion evidence").

pistol. *Laney v. United States*, 294 F. 412, 416 (D.C. Cir. 1923). Even by that early date, the use of such expert testimony was already more than two decades old. *See Commonwealth v. Best*, 62 N.E. 748 (Mass. 1902) (Holmes, J.). Ballistics testimony is "highly subjective, and cannot fall back upon a body of independently-derived scientific knowledge," given "the uniqueness of each . . . gun barrel," the "diffuse" criteria for interpretation, and reliance in large part "on experience that does not, and cannot, come out of books."[25]

Handwriting. "A single handwriting specimen may contain between 500 and 1,000 details, and most of the details are inconspicuous to the untrained eye." 2 GIANNELLI & IMWINKELRIED, *supra* note 2, § 21-2(B), at 150. Handwriting analysis (or, more broadly, the field of forensic document examination) was the subject of expert testimony in the United States by 1836, and was accepted in the majority of jurisdictions by 1900. *See* D. Michael Risinger, *Handwriting Identification*, in 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 24, at 82-83. During the past sixty years, no reported decision has rejected such expertise, and it remains admissible in every jurisdiction. *Id.* at 85, 88. Yet these experts "commonly have no way of knowing whether they have come to the right conclusions in their actual cases," *id.* at 88, and handwriting analysis remains highly subjective and heavily dependent on the specialized knowledge derived from the experience of the particular expert.[26]

Bite Marks. American courts have been unanimous since the 1970s in permitting dentists skilled in the field of forensic odontology to offer their opinions on whether a given bite mark can be linked to

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[25] Thornton, *supra* note 24, at 36-37. *See also* 1 P. GIANNELLI & E. IMWINKELRIED, *supra* note 2, § 14-1, at 373-74, § 14-(B), at 379 ("Although a positive identification is based on objective data — the striations on the bullet surface — the examiner's conclusion is essentially a subjective judgment. This judgment rests on the reproducible points of identity. There are no objective criteria used for this determination"); Alfred Biasotti & John Murdock, *The Scientific Basis of Firearms and Toolmark Identification*, in 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 24, at 141-44.

[26] *See, e.g.*, Thornton, *supra* note 24, at 33-34; Moenssens, *supra* note 24, at 269-70, 322-26; 2 P. GIANNELLI & E. IMWINKELRIED, *supra* note 2, § 21-2(B), at 150-55.

a particular criminal suspect. 1 P. GIANNELLI & E. IMWINKELRIED, *supra* note 2, § 13-4, at 365-68; DAVID L. FAIGMAN, et al., 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 24, at 156-162. This discipline, too, is highly subjective and based on specialized knowledge derived from experience, so that "more complex and difficult bite marks elicit a broad range of conclusions."[27]

Arson Investigation and Accident Reconstruction. Experts in the fields of arson investigation and accident reconstruction are frequently required to piece together a myriad of facts about a unique past event and, drawing on their past experience in analyzing somewhat similar events, render an opinion. Arson investigators have been permitted to testify for decades and as a matter of course offer subjective opinions based on specialized knowledge derived from experience.[28] Accident reconstruction experts appeared starting in the 1960s to serve as "super-experts" or "accidentologists" who combine

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[27] Raymond D. Rawson, *Scientific Status of Bitemark Comparisons*, in 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 24, at 165. *See also* 1 P. GIANNELLI & E. IMWINKELRIED, *supra* note 2, § 13-3, at 360 ("Although the expert's conclusions are based on objective data, the opinion is essentially a subjective one. . . . Like fingerprint and firearms identifications (which also have a subjective aspect), the conclusions are based on the examiner's experience and expertise."); *id.* at 363 ("In some cases the experts have arrived at diametrically opposite conclusions, while in other cases they disagree only on whether the data [are] sufficient to support a positive identification."). The heavy reliance of bite mark experts on their own personal experience, making it difficult to second-guess their analysis, is illustrated by the following observation: "Other forensic scientists who routinely compare pattern evidence, e.g., shoeprint evidence, often have difficulty in seeing the agreement claimed by bitemark specialists. The bitemark specialists attribute this blindness to the fact that the other pattern specialist is not a dentist, and therefore is unable to properly interpret the patterns caused by the teeth." Thornton, *supra* note 24, at 35.

[28] *See, e.g.*, DAVID L. FAIGMAN, et al., 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 24, at 228-29; Thornton, *supra* note 24, at 36; John J. Lentini, *The Scientific Basis of Expert Testimony on Fires, Arson, and Explosions*, in 2 MODERN SCIENTIFIC EVIDENCE, *supra* note 24, at 231 (investigators rely "heavily on their previous experiences in analyzing small bits of evidence"); *id.* at 247 (noting that "it is possible to 'prove' almost any fire scene to be the result of arson, if one is bent on doing so."); *id.* at 248 ("Few legal issues other than the cause of fires rely so heavily on the opinion of the investigator."); 2 P. GIANNELLI & E. IMWINKELRIED, *supra* note 2, § 26-4(D), at 447-51.

all the facts to opine on the ultimate issue in a case. *See, e.g.*, *Dougherty v. Boyken*, 155 N.W.2d 488, 493 (Iowa 1968); *Schafer v. Stevens*, 352 S.W.2d 471, 483 (Tex. App. 1961). Despite the inherent subjectivity of this analysis, the field is now well established, *e.g.*, RUDOLPH LIMPERT, MOTOR VEHICLE ACCIDENT RECONSTRUCTION AND CAUSE ANALYSIS (4th ed. 1994), and experts are admitted where a trial judge concludes that it will be helpful to the jury.[29]

Medical and Psychiatric Testimony. Approximately half of the experts who testify in federal court are physicians. *See* Imwinkelried, *The Next Step*, *supra* note 2, at 2279. Testifying physicians routinely draw on specialized knowledge derived from their own experience to make often subjective judgments about the matters before the jury. *E.g.*, J. WEINSTEIN & M. BERGER, *supra* note 2, § 702.04[4], at 702-26 to 702-27. This applies to even the most critical issues: for example, when a "pathologist, whether or not aided by toxicological results, attempts to determine the time of death . . . the opinion is frequently little more than an educated guess." Moenssens, *supra* note 24, at 279; *see also* 2 P. GIANNELLI & E. IMWINKELRIED, *supra* note 2, § 19-8, at 87-88 ("In most cases, only a gross estimate can be ventured. . . . [O]n many of the signs [of death], even the leading experts disagree over the correct chronology."). Likewise, psychiatrists, psychologists, and other mental health professionals routinely testify in both civil and criminal cases when an individual's past, present or future mental condition is at issue. *E.g.*, J. WEINSTEIN & M. BERGER, *supra* note 2, § 702.04[7], at 702-30 to 702-31.

We are not arguing that all of the above expert testimony is per se admissible because it is somehow "grandfathered" in. Our point is there is an enormous range of scientific and technical fields in

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[29] *See* J. WEINSTEIN & M. BERGER, *supra* note 2, § 702.04[9], at 702-31; 2 P. GIANNELLI & E. IMWINKELRIED, *supra* note 2, § 27-10(A), at 500-02. Indeed, under the Federal Rules of Evidence, accident reconstruction reports are admissible even in hearsay form under Rule 803(8)(C), with respect to the conclusions of highly qualified experts addressing factual details of the accident, *see, e.g.*, *Baker v. Elcona Homes Corp.*, 588 F.2d 551, 558 (6th Cir. 1978), *cert. denied*, 441 U.S. 933 (1979), and even with respect to the ultimate opinions on the cause of the crash rendered by an official investigator who possesses no apparent competence on the issue. *See, e.g.*, *Rainey*, 488 U.S. at 157-59, 170 (holding admissible the ultimate opinion by a naval JAG officer concerning the probable cause of an aircrash).

which experts apply their own personal experience and that of their colleagues in assessing case-specific facts, and reaching a somewhat subjective conclusion. Rule 702 still requires the trial court to determine that the witness' "specialized knowledge will assist the trier of fact." But experience-based knowledge should not be automatically inadmissible because it cannot be verified by an objective test.[30] The Eleventh Circuit was correct in ruling that such testimony "falls outside the scope of *Daubert*," at least in the sense that its admissibility should not be gauged solely in terms of the four factors mentioned in *Daubert*. JA 102.

Petitioners and their *amici* forget that *Daubert*, in formulating a test under Rule 702 to replace the *Frye* rule, was concerned with the soundness of *fundamental scientific methodologies*. The type of "science" that this Court was addressing was classic Newtonian experimental science: the underlying "'*process* for proposing and refining theoretical explanations about the world that are subject to further testing and refinement.'" 509 U.S. at 590 (quoting Brief for American Ass'n for the Advancement of Science, et al., as *Amici Curiae* at 7-8). *See* Imwinkelried, *The Next Step*, *supra* note 2, at 2276-77; Moenssens, *supra* note 24, at 286-89.

Neither Carlson nor other experts who apply their scientific or technical training in addressing the particularistic facts of a lawsuit are engaging in "science" within this definition. Petitioners' view that the *Daubert* factors apply broadly to all expert testimony would needlessly deprive triers of fact of helpful expert testimony based on

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[30] *See, e.g.*, *Chicago, B. & Q. R. Co. v. Babcock*, 204 U.S. 585, 598 (1907) (Holmes, J.) (agreeing that expert valuation of railway property might seem arbitrary, but only "in the sense in which many honest and sensible judgments are so. They express an intuition of experience which outruns analysis and sums up many unnamed and tangled impressions — impressions which may lie beneath consciousness without losing their worth."); Richard A. Epstein, *Judicial Control Over Expert Testimony: Of Deference and Education*, 87 NW. U. L. REV. 1156, 1161 (1993) ("It is often difficult for experts, outside of the legal arena, to articulate the grounds on which their judgment rests. On biological or medical questions, for example, judgment often comes from an accretion of small bits of information into a whole that is more coherent than the sum of its parts."); Clarence Morris, *The Role of Expert Testimony in the Trial of Negligence Issues*, 26 TEX. L. REV. 1, 16 (1947) (describing "the judgment of experts whose years of experience . . . have supplied them with sound, but inarticulate, bases for determining the factual likelihood of injury").

specialized knowledge derived from experience. "Such a result would turn *Daubert*, a case intended to relax the admissibility requirements for expert scientific evidence, on its head." *United States v. Jones*, 107 F.3d 1147, 1158 (6th Cir.) (rejecting *Daubert*-style attack on the field of handwriting analysis asserted by defendant in check forgery case), *cert. denied*, 117 S. Ct. 2527 (1997).[31]

II. THIS COURT SHOULD CLARIFY THE PROCEDURES TO BE USED FOR THE EFFICIENT DISPOSITION OF CHALLENGES TO EXPERT TESTIMONY

Besides the issue of the proper substantive standard under Rule 702 for admitting expert testimony under Rule 702, we believe this case presents a procedural issue worthy of this Court's attention: how the district courts can most efficiently dispose of challenges to expert testimony. We are astounded by the number of civil cases during the past several years in which opponents of expert testimony (often but not always defendants) have been permitted to impose huge burdens on the judicial system by filing blunderbuss motions asserting that the other side's expert testimony is inadmissible. These motions lead to the filing of voluminous memoranda in which the lawyers for both sides try their case on paper. Often, the parties then request, and may be granted, live hearings (so-called "*Daubert* hearings") which resemble mini-trials and can last days, even weeks.

In a case like *Daubert* or, for example, the ongoing silicone gel breast implant litigation, involving the resolution of a novel scientific

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[31] *See, e.g.*, 29 C. WRIGHT & V. GOLD, FEDERAL PRACTICE AND PROCEDURE: EVIDENCE § 6266, at 290 (1997) ("The broadest interpretation of *Daubert* should be rejected" because "it is inconsistent with both policy and precedent to make the admissibility of all expert testimony depend upon a showing that the expert's testimony is completely reliable in every respect."); Moenssens, *supra* note 24, at 277 (applying the *Daubert* factors to all cases would "raise havoc in many accepted fields of expert testimony" and would "eliminate most evidence that is based on clinical or technical experience"); *id.* at 283 (since "[t]he four *Daubert* factors are based upon a Newtonian view of 'science,'" and "this concept on what constitutes 'science' leaves a considerable portion of the forensic sciences, perhaps even a majority of them, outside of its boundaries, it is to be doubted" that the Supreme Court intended the four factors to apply to all expert testimony); Imwinkelried, *The Next Step*, *supra* note 2, at 2283 ("a moment's reflection demonstrates that this possibility is not a lively option.").

issue that potentially affects thousands of persons, such a judicial effort may be warranted and economical. But we believe that a different kind of procedure is more consistent with the Federal Rules of Evidence and Civil Procedure in a case such as this, in which the expert's specialized knowledge is derived from experience and is of the sort that has traditionally been admitted. For this type of case, this Court should make clear that district courts can insist that the litigants before them must competently employ the discovery rules governing expert testimony and then file targeted motions and responses concerning the expert in question. District courts will then be able to resolve admissibility issues in a fair, efficient manner. We set out three key elements of this perspective.[32]

A. District Courts Should Not Expend Resources on Objections to Expert Testimony Unless an Opponent Files a Targeted Motion That Affirmatively Demonstrates That Exclusion of the Expert Testimony is Warranted

In a civil case such as this one, Rule 402 (codifying a norm that all relevant evidence is presumptively admissible), the "liberal thrust" of Article VII of the Federal Rules of Evidence, efficiency and fairness concerns, and the structure of the discovery rules, all dictate placing a burden on the opponent of the evidence to make a prima facie showing that admission of the proponent's evidence would violate one or more rules, before the trial court has *any* obligation to undertake an admissibility determination.[33] Treating expert testimony as presumptively admissible unless and until the opponent discharges its burden of production to show the contrary has parallels in other areas of evidence law, serves to deter unsubstantiated attacks on expert testimony, and ensures that courts are provided the information

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[32] For a more detailed analysis, *see* Margaret A. Berger, *Procedural Paradigms for Applying the Daubert Test*, 78 MINN. L. REV. 1345 (1994).

[33] A different approach may well be appropriate in criminal cases, especially in light of the narrower discovery rights afforded in criminal cases. *See id.* at 1354-63; *United States v. Everett*, 972 F. Supp. 1313, 1325 (D. Nev. 1997).

needed to decide these issues.[34]

Placing this burden of production on opponents of expert testimony in civil cases is plainly reasonable in light of the new rules on expert discovery that went into effect in December 1993, shortly after this Court's *Daubert* decision. Previously, obtaining the type of discovery needed to file a targeted in limine motion against an expert was extremely difficult.[35] Now, Fed. R. Civ. P. 26(a)(2)(B) requires that each expert witness who might testify at trial must prepare "a complete statement of all the opinions to be expressed and the basis and reasons therefor; the data or other information considered by the witness in forming the opinions; [and] the qualifications of the witness . . . ." The Advisory Committee's Note states that the intent of the rule is to have the expert "set forth the substance of the direct examination." 146 F.R.D. at 634. As an enforcement mechanism, new Fed. R. Civ. P. 37(c)(1) confines the expert's trial testimony to the substance of this report, providing "for automatic exclusion of information that should have been revealed but was not."[36]

Assuming that the proponent of an expert has complied with Rule 26(a)(2)(B) by furnishing a complete report, the opponent will have all the basic information needed to evaluate whether to file an in limine motion to exclude the expert's testimony.[37] If the opponent

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[34] *See* Berger, *supra* note 32, at 1365-66. Under Fed. R. Evid. 104(a), however, the ultimate burden of persuading the court, by a preponderance of the evidence, that the expert testimony is admissible remains with the proponent of the expert testimony. *See id.* at 1350 & n.28, 1365.

[35] *See* 8 C. WRIGHT, A. MILLER & R. MARCUS, FEDERAL PRACTICE AND PROCEDURE: CIVIL 2D § 2029, at 416-428 (1994).

[36] *Id.*, § 2031.1, at 441; *see also* Berger, *supra* note 32, at 1369-70.

[37] Of course, if the proponent of the expert has not complied with Rule 26(a)(2)(B), sanctions are proper, and under Rule 37(c)(1) it would appear that the district court may simply preclude the expert from testifying if compliance is not promptly forthcoming. *See Sullivan v. Glock, Inc.*, 175 F.R.D. 497, 502-08 (D. Md. 1997); *United Phosphorus, Ltd. v. Midland Fumigant, Inc.*, 173 F.R.D. 675, 677-78 (D. Kan. 1997); *Reed v. Binder*, 165 F.R.D. 424, 428-31 (D.N.J. 1996); *Dighera v. Jones*, 1996 U.S. Dist. LEXIS 16375, at *14-*15 (D. Kan. Oct. 29, 1996); *Nguyen v. IBP, Inc.*, 162 F.R.D. 675, 678-81 (D. Kan. 1995); *Mi-Jack Prods. v. International Union of Operating Eng'rs, Local 150*, 1995 U.S. Dist. LEXIS 16930, at *21-*26 (N.D. Ill. Nov. 13, 1995).

desires still more information, the expert can be deposed as of right pursuant to Fed. R. Civ. P. 26(b)(4).[38] These post-*Daubert* rules guarantee civil litigants the tools needed to test their opponents' expert testimony prior to trial in an adversarial context, so that any weaknesses can be exposed. "By requiring the parties to follow the disclosure procedure . . . the court will have before it the complete statement of opinions to which the expert will testify and their factual basis," providing "a helpful record for rulings under Rule 104(a)."[39]

How is this mass of information most efficiently addressed by a busy trial court? We submit that, armed with this record, the burden of initially coming forward with evidence showing that a given expert's testimony is inadmissible should fall on the opponent of the evidence. The opponent ought to be required to file a motion in limine that identifies a specific deficiency in the testimony, supported by precise citations to record evidence, before the court is required to expend time on the motion.[40] Except in rare cases where the expert concedes that there are fatal flaws in his or her testimony,[41] normally the opponent will have to submit an affidavit or deposition from at least one of its own experts to demonstrate a fatal flaw in the

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[38] Previously, depositions of experts were available only by leave of court. *See* C. WRIGHT, et al., *supra* note 35, § 2031.1, at 443.

[39] Hon. William W Schwarzer, *Management of Expert Evidence*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 30 (Federal Judicial Center 1994).

[40] "Objections to evidence raised before trial are best presented by a motion in limine." *Id.* at 29. Motions in limine are the traditional means of attacking the *admissibility* of evidence; motions for summary judgment should be reserved for testing the *sufficiency* of the evidence to create genuine issues of material fact under governing substantive law. *See* Berger, *supra* note 32, at 1376-81.

[41] Where an expert affirmatively concedes that he or she has basically no relevant knowledge of the matter at hand, such testimony can obviously be excluded on its face. *See, e.g. Ancho v. Pentek Corp.*, 1998 U. S. App. LEXIS 24861, at *12-*25 (7th Cir. Oct. 6, 1998) (after receiving Rule 26(a)(2)(B) report and deposing expert in products liability case, defendant won in limine motion by pointing to expert's utter lack of relevant experience; ruling affirmed with minimal discussion).

testimony of the targeted expert.[42] Common sense suggests that if an opponent has produced *not a single expert* prepared to testify that the testimony of the targeted expert is methodologically flawed, the district court should not be required to engage in Rule 104(a) factfinding, and should be permitted to deny the motion outright.

Once the opponent has met its burden, the proponent's expert should be given a fair opportunity to respond to specific criticisms. The district court will then be well positioned to make rulings under Fed. R. Evid. 104(a) resolving any factual disputes that appear on the record.

B. If an Opponent Has Demonstrated a Fatal Flaw in an Expert's Testimony, the Court May Exclude the Testimony Without Holding a Live Hearing or Offering the Proponent Another Chance

Where an opponent *does* file a motion in limine, supported by proper record materials demonstrating one or more flaws that appear to undermine the reliability of the targeted expert's testimony, then a district court should act with equal dispatch in granting the motion unless the proponent comes forward to explain, amplify, or correct the testimony and to rebut the apparent flaws. In some cases, there will be no factual conflict to resolve under Rule 104(a): the district court may decide to credit the uncontroverted testimony of the opponent's expert. We offer two examples to demonstrate the efficiency offered by such targeted motions.

In *O'Conner v. Commonwealth Edison Co.*, 13 F.3d 1090, 1105-07 (7th Cir.), *cert. denied*, 512 U.S. 1222 (1994), a nuclear power plant worker sued his employer alleging that he was overexposed to radiation, causing him to develop cataracts ten months later. His treating ophthalmologist, citing four medical articles and his "prior experience" with five patients, testified that "radiation-induced cataracts can be identified by mere observation." *Id.* at 1106-07 &

[42] *See* Berger, *supra* note 32, at 1371-72. The opponent should not be able to pull out of a hat, in support of such a motion, an affidavit from any expert in the world; rather, fairness dictates that an affidavit come only from an expert who has been previously listed and has been available during the discovery process. *See id.* at 1372-73, 1375.

n.19. As he put it, "*I know what cataracts look like* when they've been induced by radiation, . . . [and] they cannot be mistaken for anything else." *Id.* at 1106 (emphasis added) (citation omitted). The defendant produced an expert affidavit (from the author of one of the articles cited by the plaintiff's expert) stating that mere observation cannot produce a valid opinion, but that four other steps are critical to proper analysis in this field. The proffered testimony did not accurately rebut the specific flaws identified by the defendant's targeted affidavit, and the district court credited the affidavit, granted summary judgment, and was affirmed. *Id.* at 1107.

A similarly targeted expert affidavit disposed of *Diviero v. Uniroyal Goodrich Tire Co.*, 919 F. Supp. 1353 (D. Ariz. 1996), *aff'd*, 114 F.3d 851 (9th Cir. 1997), involving an auto accident caused by an allegedly defective tire. The plaintiffs' expert opined that the tire had been defective, based solely on his experience in looking at "many, many tires over my career." 919 F. Supp. at 1359. He engaged in no analysis to rule out alternative causes, relying just on "his vast experience." *Id.* at 1359-60. The defendant produced two experts who specifically targeted the testimony of the plaintiffs' expert, testifying that his experience did not qualify him to opine on causation because he lacked the critical experience of having worked at a tire company testing steel-belted radial tires under controlled conditions. *Id.* at 1356-57. This ruling was affirmed. The plaintiffs failed to rebut the defendant's challenge, the district court credited the defendant's experts and excluded the plaintiffs' expert, and the court of appeals affirmed. 114 F.3d at 852.

Of course, not all motions in limine will be as straightforward as these, and occasionally a district court may find it necessary to receive live testimony to obtain further clarification on dispositive factual issues. But live hearings should be the exception, not the rule. In order to maintain the efficiency of judicial screening, when a court excludes expert testimony, regardless of which procedure it used, the court should generally refuse to grant the proponent of the evidence an additional opportunity to obtain new expert evidence.[43]

[43] *See* Berger, *supra* note 32, at 1375-76. Of course, before exclusion of an expert's testimony, the expert should be given a fair opportunity to explain, amplify upon or correct his or her Rule 26(a)(2)(B) report in response to the targeted

C. Where, as in the Instant Case, an Opponent of an Expert Presents Only Lawyers' Arguments Critical of the Expert's Reasoning, and Does Not Provide Supporting Record Evidence, the District Court Should Refuse to Waste Its Time and Should Reject the Challenge

To illustrate our point in the context of this case, we close by noting that where the opponent of an expert has *not* presented the judge with any targeted record material demonstrating inadmissibility, but instead simply attacks the expert's reasoning (i.e., with lawyers' arguments in the form of briefs), the district court should refuse to entertain the motion. The court ought to do this both because there is no basis for granting it, and to deter the filing of such wasteful motions in the future. The district court's failure in this case to reject petitioners' motion on that basis highlights the nature of the problem.

The petitioners' motion in limine in this case sought exclusion of Dennis Carlson's testimony solely on the basis of lawyers' arguments that it was too "subjective" in nature. In contrast to the *O'Conner* and *Diviero* cases, petitioners cited absolutely no expert testimony critical of anything in Carlson's depositions.[44] Indeed, it appears from the

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objections raised against the report, at least as long as the expert made a good faith attempt to file a reasonably complete Rule 26(a)(2)(B) report. It would be unreasonable for a district court to expect an expert to anticipate and answer in advance every conceivable objection that might be made to his or her testimony.

[44] *See* Memorandum in Support of Motion of All Defendants to Exclude Testimony of Plaintiff's Expert Dennis Carlson and to Conduct Fed. R. Evid. 104(a) Hearing, filed Jan. 25, 1996. For example, petitioners complained of Carlson's "subjective, visual review of the tire," *id.* at 2, and emphasized that "Carlson admits that the determination of what constitutes sufficient evidence of overdeflection is subjective," *id.* at 7, and was by his own admission relying on his "experience," which had provided him with the knowledge of what marks on a tire are caused by customer abuse as opposed to a defect in the tire. *Id.* at 8. Petitioners criticized Carlson for providing only a "subjective" analysis of why the marks on the tire did not constitute evidence of abuse, *id.* at 10-11, and for concluding that the second puncture in the tire had nothing to do with its failure. *Id.* at 11-12.

In their legal analysis under Rule 702, invoking the four *Daubert* factors, *id.* at 18-23, petitioners argued that Carlson was not practicing "sound science" because he was only relying on "visual inspection," and had "not done tests or other procedures that would produce *objective* findings." *Id.* at 19 (emphasis added). Petitioners again emphasized that "[t]he 'subjective' nature of his technique is patent

record that Carlson's methodology, which concededly depends heavily on his specialized knowledge derived from experience, was the same as that used by petitioners' own expert, Thomas Dodson.[45]

The district court adopted petitioners' position on the applicability of the four *Daubert* factors in its opinions excluding Carlson's testimony.[46] In particular, the district court emphasized: "Carlson's method for analyzing the tire is not susceptible to testing or falsification. Carlson admits that his work is 'subjective' and that there is a certain degree of 'uncertainty' in his conclusions."[47] The

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and admitted by Carlson." *Id.* at 20 (citations omitted). Characterization of Carlson's testimony as "subjective" meant that it was doomed under the four *Daubert* factors, petitioners argued, because: (1) Carlson had not "tested a tire like this one" before, *id.* at 21; (2) Carlson's subjective opinion had not "survived rigorous attempts at falsification," e.g., through peer review, *id.* at 21-22; (3) "Carlson's technique is subjective, [so] there is no known or potential rate of error," *id.* at 22; and (4) "by Carlson's own admission . . . the vast majority of tires which fail before the end of their useful tread life fail as a result of abuse," so that Carlson's subjective method of deciding which tires *have not* failed as a result of abuse cannot qualify as generally accepted within the relevant scientific community. *Id.* at 22-23.

[45] Dodson testified that he had read Carlson's deposition, but there is no evidence that he disagreed with anything in it with respect to the proper method for conducting a tire failure analysis. JA 425. Like Carlson, Dodson based his testimony on his "experience of being in the tire industry." JA 409; *see also* JA 410. Like Carlson, Dodson based his opinion on his "visual and nondestructive examination" of the tire done at the office of his client's law firm. JA 426, 429. Like Carlson, Dodson had some photographs taken, but did not take x-rays, cut into the tire, or conduct any other objective tests. JA 426. Like Carlson, Dodson conceded that he just "visually inspected the tires," and took some photographs — "that's it." JA 426. *See also* JA 430-35 (Dodson's written report).

[46] The district court issued two opinions: an initial ruling on April 1, 1996, *see* JA 26-47, and a supplemental order on June 5, 1996, *see* JA 88-94. Because the second order actually granted plaintiffs' motion for reconsideration, and then set forth further reasons for the district court's exclusion of Carlson's testimony, it seems clear that the orders must be read together for a full understanding of the reasons for the district court's ultimate decision.

[47] JA 37 (citations omitted). Here, the district court quoted at length from a portion of Carlson's deposition in which he agreed with the questioner that "it all comes down to the subjective opinion of whoever is doing the tire failure analysis

district court also noted Carlson's frank concession that "he could not identify any specific tests or other procedures which could be used to *corroborate* or refute the results of his visual inspection of the tire at issue." JA 38 (emphasis added) (citations omitted). Prior to the district court's final ruling, the plaintiffs argued that the four *Daubert* factors were inappropriate for evaluating specialized knowledge, based on years of experience, of an expert such as Carlson, and they urged that a variety of other, more flexible factors should instead be utilized in assessing such testimony. Memorandum of Law in Support of Plaintiffs' Motion for Reconsideration, filed Apr. 15, 1996, at JA 59, 62-63. The district court turned a deaf ear to the plaintiffs' urging and instead chose to rely solely on the four *Daubert* factors, which it viewed as mandating the exclusion of this "subjective" expert testimony because it lacked "objective" corroboration. JA 90-92 & n.1.

In our view, both the petitioners' arguments and the district court's analysis were erroneous as a matter of law because, on this record, there is no evidence to support the finding that Carlson's reliance on his specialized knowledge derived from experience in any way precludes him from forming a reliable opinion in this case.

Quite to the contrary, from the record, it appears that the field of tire failure analysis is populated by engineers who have had experience working at a tire company during which, by virtue of observing and studying the results of various tests involving the deliberate abuse of tires, they developed an experiential base which gives them a superior ability to assess the possible reasons for the failure of a tire whose past history may be unknown.[48] They thereby

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as to whether those factors of abuse you've listed . . . exist in a given tire." JA 37-38 n.9 (quoting Carlson Depo. at 402).

[48] For example, both Carlson and petitioners' expert, Thomas Dodson, previously worked at tire companies. JA 108, 409-10, 415-18. According to Carlson, during a decade of working as a design engineer at Michelin, he became extremely familiar with the range of design and manufacturing defects that can cause a tire to fail, and with the physical markings that will be found on tires that have suffered customer abuse substantial enough to cause a failure. JA 360-61, 370-71, 390-91, 412, 415-18; *see also* JA 108-11, 113-15, 119-22, 127, 129-32, 140, 143, 150-52, 194-96, 199-201. In *Diviero*, the district court not only agreed that this is so, but it *required* this type of experience. *See* p. 25, *supra*.

become trained observers of tire defects. After gaining this experience, they work as consultants providing expert testimony to parties involved with tire failure litigation. Essentially, what these experts do is closely examine the tire in question to see what it looks like.[49] If it looks like it has been abused in the past, these experts conclude that the tire failed because of abuse;[50] if the tire does not bear the marks of abuse, the experts conclude that the tire failed on account of a design or manufacturing defect, the only other likely reason.[51]

A trier of fact may be aided in reaching a conclusion about the cause of the tire failure after hearing such an expert's reasoning, accompanied by photographs of the relevant marks on the tires, particularly after the expert's conclusions have been tested by cross-examination. *See Daubert*, 509 U.S. at 596. Petitioners' view that such evidence must be excluded means that a plaintiff in a federal court would be unable to prove that he or she was injured by a defective tire unless in discovery the plaintiff somehow managed to obtain eyewitness testimony or documentary proof that the

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[49] *See* JA 209-13, 216-19, 221-34, 237, 240-41, 248, 256-57, 285-86, 299-300, 302-07, 310-13, 316, 346-47, 359, 370-75; *Tillery* Carlson Depo. 145-46, 155-56, 253-54, 518-20. Often, "objective" tests on the tire are of little or no use in this process. *See, e.g.*, JA 234-36, 268, 270, 272, 357-58.

[50] Carlson readily agreed that customer abuse is by far the most common cause of tire failures. *See* JA 190-91, 194, 206, 278-79, 284; *Tillery* Carlson Depo. 226.

[51] Carlson testified that this was the methodology that he used and that is generally used throughout the field. JA 221, 237; *Tillery* Carlson Depo. 671-73. In examining tires for signs of abuse, Carlson testified, he will resolve any doubt in favor of the tire manufacturer, in recognition of the fact that the vast majority of tires fail because of abuse. JA 285-86, 383-85, 387-88; *Tillery* Carlson Depo. 138-39. (As confirmation of this conservative approach, Carlson testified that on about 90 percent of the tires sent to him for evaluation, he finds no defect. *Tillery* Carlson Depo. 669-71). Thus, although there are four physical markings typical of abuse, Carlson's practice is to conclude that the tire has been abused if there are severe markings of one particular type (rim flange impressions), *see* JA 386; *Tillery* Carlson Depo. 94-95, or else moderate markings of two of the four types. *See* JA 213, 216-17, 223, 231-33, 275-78, 285-86, 374, 387-88, 391-92, 402; *Tillery* Carlson Depo. 531-32. There appears to be no evidence in the record indicating that this approach to assessing the markings is unusual or unreasonable, or has a function contrary to Carlson's practice of giving the benefit of the doubt to the manufacturer.

defendant was manufacturing defective tires, proof that is unlikely to be available given a manufacturer's control over the manufacturing process.

We urge the Court not to adopt a per se rule of inadmissibility for all expert testimony that puts forth an explanatory theory which has been refined by experience and is incapable of being objectively tested by the scientific method. And even when it is perhaps theoretically possible to devise an objective test at enormous expense, the Court should consider the practical effect of making such testing a condition of admitting all expert testimony.

On this record, the district court should not have excluded Carlson's testimony based merely on the fact that it was based on specialized knowledge derived from experience, could not be corroborated by "objective" means, and therefore flunked the four *Daubert* factors. For that reason, it erred as a matter of law, and the case should be remanded to the district court for analysis under the proper legal standard.[52]

CONCLUSION

The Eleventh Circuit's decision should be affirmed.

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[52] We take no position on whether Carlson's testimony should survive analysis under a correct construction of Rule 702, or can avoid exclusion under other rules. Indeed, given various irregularities in the affidavits filed by Carlson and petitioners' original expert, and in at least some parts of Carlson's deposition, the Eleventh Circuit indicated that the need to resolve "a number of potentially troubling criticisms" made this an open question. *See* JA 103 & n.9.

Such factual concerns, however, do not affect the basic issue concerning Rule 702 that is before this Court. For one thing, it seems clear that the District Court was well aware of these irregularities, but chose not to rely on them as a reason to exclude respondents' expert testimony. *See* JA 34 & n.6. Furthermore, it appears that the testimony of petitioners' expert witness possesses some of these same irregularities, *see, e.g.* JA 73, as the Eleventh Circuit noted. *See* JA 103 n.10. Perhaps for that reason, the petition for certiorari in this case mentioned none of these irregularities, presenting only an abstract issue concerning the legal relevance of the four *Daubert* factors in cases involving engineering experts. Petitioners' belated focus on these irregularities, *see* Pet. Br. at 4-7, 9 n.5, 10 n.6, 48-49, strikes us as an irrelevant distraction. Like the Solicitor General, *see* Brief for the United States at 3-4, we have ignored these irregularities and, like the courts below, we have discussed Carlson's testimony only as it appeared in final form.

Respectfully submitted.

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October 19, 1998

APPENDIX

QUALIFICATIONS OF *AMICI CURIAE*

Margaret A. Berger is the Suzanne J. and Norman Miles Professor of Law at Brooklyn Law School. She is the co-author of a five-volume treatise on the Federal Rules of Evidence, WEINSTEIN'S EVIDENCE (with Hon. Jack B. Weinstein); the co-author of EVIDENCE: CASES AND MATERIALS (9th ed. 1997) (with Hon. Jack B. Weinstein, John H. Mansfield, and Norman Abrams); and the author or co-author of four other books and more than twenty articles. She served as the Reporter for the Advisory Committee on the Federal Rules of Evidence from 1993 to 1996. She is a member of the American Law Institute and a Fellow of the American Bar Foundation.

Professor Berger's work in the field of evidence has focused heavily during the past decade on how the judicial system can most accurately and efficiently employ expert testimony, particularly with respect to science and technology. She served as a consultant to the Carnegie Commission on Science, Technology, and Government, producing two reports (PROCEDURAL AND EVIDENTIARY MECHANISMS FOR DEALING WITH EXPERTS IN TOXIC TORT LITIGATION: A CRITIQUE AND PROPOSAL (1991), and SCIENCE AND TECHNOLOGY IN JUDICIAL DECISION MAKING: CREATING OPPORTUNITIES AND MEETING CHALLENGES (1993)), and filing an *amicus* brief on behalf of neither party in *Daubert*. In 1994 she served as a consultant to the Federal Judicial Center, authoring the *Evidentiary Framework* chapter in its REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 37-117 (1994), which the Center published to assist federal judges in carrying out the *Daubert* decision. In 1994, she also published an article on practical methods for assessing expert testimony under the *Daubert* decision, *Procedural Paradigms for Applying the Daubert Test*, 78 MINN. L. REV. 1345 (1994). In 1996, Professor Berger chaired the panel that selected the court-appointed experts to serve under Fed. R. Evid. 706 in *In Re: Silicone Gel Breast Implant Products Liability Litigation (MDL 926)*.

Professor Berger received the 1998 Francis Rawle Award from the ALI/ABA Committee on Continuing Professional Education for playing "a vital role in formulating new approaches to the judicial treatment of scientific evidence and in educating the legal and scientific communities about ways to implement them."

Edward J. Imwinkelried is a professor of law at the University of California, Davis, School of Law. He is the author or co-author of more than thirty books, and more than 100 articles, in the field of evidence. His publications addressing the subject of evidence generally include EVIDENTIARY FOUNDATIONS (4th ed. 1998), and EVIDENCE: TEACHING MATERIALS FOR AN AGE OF SCIENCE AND STATUTES (4th ed. 1997) (with Ronald L. Carlson, Edward J. Kionka, and Kristine Strachan). He is a former chair of the Evidence Section of the American Association of Law Schools, and a former member of the Subcommittee on the Federal Rules of Criminal Procedure and Evidence of the Criminal Justice Section of the American Bar Association. He is a member of the Distinguished Faculty of the National College of District Attorneys, and he has received the President's Award from the National Association of Criminal Defense Lawyers.

Professor Imwinkelried has published two major works on the subject of expert testimony: SCIENTIFIC EVIDENCE (2d ed. 1993 & Supp. 1998) (with P. Giannelli) (a two-volume treatise first published in 1986), and THE METHODS OF ATTACKING SCIENTIFIC EVIDENCE (3d ed. 1997) (first published in 1982). He has published dozens of articles on expert testimony during the past two decades. One article, *The Next Step After Daubert: Developing a Similarly Epistemological Approach to Ensuring the Reliability of Nonscientific Expert Testimony*, 15 CARDOZO L. REV. 2271 (1994), is cited in several *amicus* briefs that have been filed in support of petitioners in this case.

Stephen A. Saltzburg is the Howrey Professor of Trial Advocacy, Litigation and Professional Responsibility at the George Washington University Law School, where he teaches evidence, trial advocacy, civil procedure, and criminal procedure, among other subjects. He also serves as co-director of the University of Virginia Trial Advocacy Institute. He served as Deputy Assistant Attorney General for the Criminal Division of the U.S. Department of Justice from 1988 to 1989.

Professor Saltzburg is the author or co-author of more than twenty books, and more than thirty-five articles, in the field of evidence, including FEDERAL RULES OF EVIDENCE MANUAL: A COMPLETE GUIDE TO THE FEDERAL RULES OF EVIDENCE (7th ed. 1998) (with Michael M. Martin and Daniel J. Capra); EMERGING PROBLEMS UNDER THE FEDERAL RULES OF EVIDENCE (3d ed. 1998) (contributing editor); EVIDENCE: THE OBJECTION METHOD (1997) (with Dennis P. Prater, Christine M. Arguello, Daniel J. Capra, and Michael M. Martin); and EVIDENCE IN AMERICA: THE FEDERAL RULES IN THE STATES (1987) (4 volumes) (with Gregory P. Joseph and the Trial Evidence Committee of the American Bar Association Section of Litigation).

Among his many professional activities that have dealt with the practical application of evidence rules to civil and criminal litigation, Professor Saltzburg has served as the Reporter for the Advisory Committee on the Federal Rules of Criminal Procedure, 1984-89; as a member of the Advisory Committee on the Federal Rules of Criminal Procedure, 1990-95; as the Liasion Member from the Advisory Committee on the Federal Rules of Criminal Procedure to the Advisory Committee on the Federal Rules of Evidence, 1993-95; as the Reporter for the American College of Trial Lawyers Task Force on Litigation Issues, 1986-88; as the Chair of the ABA Criminal Justice Section Committee on Trial Advocacy, 1990-96; as the Vice-Chair of the ABA Litigation Section Committee on Trial Evidence, 1991-95; and as the Co-Chair of the ABA Litigation Section on Civil Trial Standards, 1997-98.